

Title (en)  
POLYCRYSTALLINE CUBIC BORON NITRIDE AND PRODUCTION METHOD THEREFOR

Title (de)  
POLYKRISTALLINES KUBISCHES BORNITRID UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
NITRURE DE BORE CUBIQUE POLYCRISTALLIN ET PROCÉDÉ DE PRODUCTION ASSOCIÉ

Publication  
**EP 3932891 A4 20220427 (EN)**

Application  
**EP 20762354 A 20200227**

Priority  
• JP 2019036262 A 20190228  
• JP 2020001437 W 20200117  
• JP 2020008151 W 20200227

Abstract (en)  
[origin: US2021238100A1] A polycrystalline cubic boron nitride comprising 96% by volume or more of cubic boron nitride, wherein the cubic boron nitride has a dislocation density of more than  $8 \times 10^{15}/\text{m}^2$ , the polycrystalline cubic boron nitride comprises a plurality of crystal grains, and the plurality of crystal grains have a median diameter  $d_{50}$  of an equivalent circle diameter of less than 100 nm.

IPC 8 full level  
**C04B 35/5831** (2006.01); **B23B 27/14** (2006.01); **B23B 27/20** (2006.01); **B23B 51/00** (2006.01); **B23C 5/16** (2006.01); **B23P 15/28** (2006.01); **C01B 21/064** (2006.01); **C04B 35/645** (2006.01)

CPC (source: EP KR US)  
**B23B 27/18** (2013.01 - US); **B23B 51/00** (2013.01 - KR); **C01B 21/0648** (2013.01 - EP); **C04B 35/5831** (2013.01 - EP KR US); **C04B 35/622** (2013.01 - KR); **C04B 35/645** (2013.01 - EP KR); **B23B 2226/125** (2013.01 - US); **C04B 2235/386** (2013.01 - EP); **C04B 2235/5445** (2013.01 - EP KR); **C04B 2235/5454** (2013.01 - EP); **C04B 2235/549** (2013.01 - US); **C04B 2235/656** (2013.01 - EP); **C04B 2235/6567** (2013.01 - EP KR); **C04B 2235/661** (2013.01 - EP KR); **C04B 2235/72** (2013.01 - EP KR); **C04B 2235/762** (2013.01 - EP KR US); **C04B 2235/767** (2013.01 - EP KR US); **C04B 2235/77** (2013.01 - KR US); **C04B 2235/781** (2013.01 - EP KR); **C04B 2235/785** (2013.01 - EP); **C04B 2235/786** (2013.01 - KR); **C04B 2235/788** (2013.01 - EP); **C04B 2235/80** (2013.01 - EP)

Citation (search report)  
• [X] US 2011230122 A1 20110922 - LE GODEC YANN [FR], et al  
• [A] EP 2752398 A1 20140709 - SUMITOMO ELECTRIC INDUSTRIES [JP]  
• See references of WO 2020175644A1

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Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**US 11214522 B2 20220104**; **US 2021238100 A1 20210805**; CN 113454046 A 20210928; CN 113454046 B 20230110; EP 3932891 A1 20220105; EP 3932891 A4 20220427; JP 6798091 B1 20201209; JP WO2020175644 A1 20210311; KR 20210129661 A 20211028; WO 2020174922 A1 20200903; WO 2020175644 A1 20200903; WO 2020175644 A9 20201112

DOCDB simple family (application)  
**US 202017052855 A 20200227**; CN 202080010551 A 20200227; EP 20762354 A 20200227; JP 2020001437 W 20200117; JP 2020008151 W 20200227; JP 2020541830 A 20200227; KR 20217027190 A 20200227